Appendix 2

Claims

3. (Amended) Method according to [one of claims 1 or 2] claim 1, characterized in that the composition of the melt is set in such a manner that the concentration ratio of carbon to silicon is less than or equal to 2.6, preferably less than or equal to 2.0:

$C/Si \leq 2.6$, preferably = 2.0

4. (Amended) Method according to [one of claims 1 through 3] claim 1, characterized in that the carbon content of the melt is set to a value of 2.2 to 3.1 wt-%, preferably 2.6 to 2.95%.

5. (Amended) Method according to [one of claims 1 through 4] claim 1, characterized in that a final content of silicon of 1.2 to 1.85 wt-%, preferably 1.4 to 1.75%, is provided.

6. (Amended) Method according to [one of claims 1 through 5] claim 1, characterized in that, when the composition of the melt is set using alloying methods, 0.002 to 0.65 wt-%, preferably 0.005 to 0.04 %, of aluminum is added and dissolved therein.

7. (Amended) Method according to [one of claims 1 through 7] claim 1, characterized in that the nickel content of the melt is set to a value of 3.51 to 4.7 wt-%, preferably 4.15 to 4.6 wt-

%.

8. (Amended) Method according to [one of claims 1 through 7] claim 1, characterized in that the composition of the melt is set in such a manner that the concentration ratio of molybdenum to chromium is less than 1.0, preferably less than 0.8:

$Mo/Cr < 1.0$, preferably < 0.8.

9. (Amended) Method according to [one of claims 1 through 8] claim 1, characterized in that the content levels of chromium and molybdenum in wt-% of the melt are set to the values of

chromium	1.5 to 1.9
molybdenum	0.3 to 0.9.

10. (Amended) Method according to [one of claims 1 through 9] claim 1, characterized in that 1.8 to 3.9 wt-% of vanadium, preferably 1.9 to 2.9 wt-%, is added to the melt and dissolved therein.

11. (Amended) Method according to [one of claims 1 through 10] claim 1, characterized in that some of the vanadium is replaced by additional elements from group 5 of the periodic system in an amount of less than 0.6 wt-%, and mixed carbides are formed.

12. (Amended) Method according to [one of claims 1 through 11] claim 1, characterized in that the cast body or the roll is subjected to a heat treatment which comprises heating from room temperature to a treatment temperature of 400 °C to 500°C, preferably 460 °C to 480 °C, holding at this temperature for at least two hours, preferably at least 8 hours, and cooling to room temperature, optionally with a low-temperature treatment.

15. (Amended) Casting material according to claim 13 [or 14], characterized in that the alloy contains, in wt-%,

2.0 to 3.5	carbon
1.0 to 2.0	silicon
0.5 to 2.0	manganese
1.2 to 2.5	chromium
3.5 to 4.9	nickel
0.5 to 2.1	molybdenum
1.5 to 4.9	vanadium

with the remainder iron and impurities.

16. (Amended) Casting material according to [one of claims 13 through 15] claim 13, characterized in that the alloy has a concentration ratio of carbon to silicon of less than or equal to 2.6, preferably less than or equal to 2.0:

C/Si ≤ 2.6, preferably ≤ 2.0

17. (Amended) Casting material according to [one of claims 13 through 16] claim 13, characterized in that the alloy contains 2.6 to 2.95% carbon by weight.

18. (Amended) Casting material according to [one of claims 13 through 17] claim 13, characterized in that the alloy contains 1.2 to 1.85 wt-% of silicon, preferably 1.4 to 1.75%

19. (Amended) Casting material according to [one of claims 13 through 18] claim 13, characterized in that the alloy contains 0.002 to 0.65 wt-% of aluminum, preferably 0.005 to 0.04 %.

20. (Amended) Casting material according to [one of claims 13 through 19] claim 13, characterized in that the alloy contains 3.5 to 4.9 wt-% of nickel, preferably 4.15 to 4.6%.

21. (Amended) Casting material according to [one of claims 13 through 20] claim 13, characterized in that the alloy has a concentration ratio of molybdenum to chromium of less than 1.0, preferably less than 0.8:

Mo/Cr < 1.0, preferably < 0.8.

22. (Amended) Casting material according [to one of claims 13 through 21] claim 13, characterized in that the alloy contains in wt-%

chromium 1.5 to 2.01

molybdenum 0.3 to 0.9.

23. (Amended) Casting material according to [one of claims 13 through 22] claim 13, characterized in that the alloy contains 1.8 to 3.9 wt-% of vanadium, preferably 1.9 to 2.95 wt-%.

24. (Amended) Casting material according to [one of claims 13 through 23] claim 13, characterized in that some of the vanadium content is replaced by additional elements from group 5 of the periodic system in a proportion of less than 0.6 wt-%.

25. (Amended) Casting material according to [one of claims 13 through 24] claim 13, characterized in that the material possesses, in vol-%,

8 to 35, preferably 10 to 25, eutectic carbides,

and 1 to 15, preferably 2 to 10, carbides of the elements of group 5 of the periodic system.

28. (Amended) Composite indefinite chill rolls according to claim 26 [or 27], characterized in that the working or sleeve material has a composition, in wt-%, of

C = 2.0 to 3.5, preferably 2.21 to 3.1, especially 2.6 to 2.95

Si = 1.0 to 2.0, preferably over 1.2 to 1.85, especially 1.4 to 1.75

Mn = 0.5 to 2.0, preferably 0.6 to 1.6, especially 0.7 to 1.4

Cr = 1.0 to 3.0, especially 1.5 to 2.01

Ni = 3.5 to 4.9, preferably 3.5 to 4.7, especially 4.15 to 4.6

Mo = 0.20 to 2.9, especially 0.3 to 0.9

Al = 0.002 to 0.65, preferably 0.005 to 0.1, especially 0.005 to 0.04

V = 0.5 to 5.9, preferably 1.8 to 3.9, especially 1.9 to 2.9

with the remainder being iron and impurities and the roll core is formed of ductile iron.

29. (Amended) Composite indefinite chill rolls according to claim 26 [through 28], characterized in that the working or sleeve material has, in wt-%,

V = 3.1 to 3.9, preferably 3.3 to 3.75 and

Nb+Ta = less than 0.6

with the remainder being iron and impurities.

30. (Amended) Composite indefinite chill rolls according to [one of claims 26 through 29] claim 26, characterized in that the binding zone between the sleeve or working part and the roll core of low-alloy cast iron, preferably of ductile iron, has, in the radial direction, a bending strength (3-point bending test) of greater than 600 N/mm^2.

Appendix 1

--ABSTRACT OF THE DISCLOSURE

Method for the production and processing of alloyed casting material for the working area of indefinite chill rolls, containing the elements carbon, silicon, manganese, chromium, nickel, molybdenum, vanadium, and if applicable additional elements of group 5 of the periodic system, aluminum, and the remainder iron, accompanying elements, and impurities related to the manufacturing process, characterized in that a melt is produced that has a chemical composition in wt-% of 2.0 to 3.5 C; 1.0 to 2.0 Si; 0.5 to 2.0 Mn; 1.0 to 3.0 Cr; 3.5 to 4.9 Ni; 0.2 to 2.9 Mo; with the remainder iron and impurities, and more than 0.5 % vanadium by weight in amounts up to 5.9 wt-% is added, is dissolved therein, and the composition of the melt is set using alloying methods by fixing the concentrations of carbon and silicon in the presence of nickel and the effective total of the carbide forming elements in such a manner that, at its solidification, a microstructure is formed which exhibits 1.0 to 3.0 vol-% of graphite, with the guideline that more than 20 but less than 100 graphite particles are present per mm^2 of observed surface in a metallographic section and the remainder is composed primarily of martensite, 8 to 35 vol-% of eutectic carbides, and at least 1 vol-% of finely distributed vanadium carbides. Subsequently, the melt is cast in a form, preferably a centrifugal casting mold, and is allowed to solidify into a body, preferably a working body of a roll, and optionally, the cast body is further processed, for example, into